Claims

1. A liposomal formulation characterized by the fact of containing one dinitroaniline incorporated or encapsulated.

2. A liposomal formulation, according to claim 1, characterized by the fact of the dinitroaniline being trifluralin.

3. A liposomal formulation, according to ~~any of the claims 1 and 2;~~ characterized by the fact of containing liposomes with diameter varying from 0.01 µm to 50 µm.

4. A liposomal formulation, according to ~~any of the claims 1 to 3,~~ characterized by the fact of mixing populations of particles with different diameter.

5. A liposomal formulation, according to ~~any of the claims 1 to 4,~~ characterized by the fact of mixing populations of particles, respectively bigger and lower than 100 nm.

6. Liposomal formulations, according to ~~any of the previous claims,~~ characterized by the fact of being prepared with any of the following lipids, hydrogenated or not, individually or in mixtures, in any molar ratio: distearoylphosphatidylcholine (DSPC), phosphatidylcholine (PC), cholesterol (Chol) or derivatives, sphingomielin (SM), dioleoylphosphatidylcholine (DOPC), dioleoylphosphatidylglycerol (DOPG), phosphatidylglycerol (PG), dimiristoylphosphatidylcholine (DMPC), dipalmitoylphosphatidylcholine (DPPC), gangliosides, ceramides, phosphatidylinositol (PI), phosphatydic acid (PA), dicetylphosphate (DcP), dimiristoylphosphatidylglycerol, (DMPG), stearylamine (SA), dipalmitoylphosphatidylglycerol (DPPG) and other synthethic lipids.

7. Process for th preparation of a liposomal formulation containing one dinitroaniline, characterized by:

- obtention of a liposomal preparation containing a dinitroaniline by hydration of a lipidic film containing the dinitroaniline
- lyophilization of the dinitroaniline liposomal formulation
- rehydration of the dehydrated liposomal formulation

8. Process according to claim 7, characterized by the performing of a sizing step of the dinitroaniline liposomal formulation in order to reduce the vesicle diameter, done previously to the dehydration step.

9. Process, according to claim 8, characterized by the performing of the sizing step by extrusion under pressure through porous membranes.

10. Process, according to ~~any of the claims 7 to 9~~, characterized by the fact that the hydration is carried out by the addition of a small amount of an aqueous solution, followed by the addition of the remaining volume of the aqueous solution, after a resting period.

11. Process, according to claim 10, characterized by the fact of using, in the hydration steps, a non-saline solution.

12. Process, according to claim 11, characterized by the fact of performing the rehydration steps with saccharose, trehalose, glucose or any other sugar solution.

13. Process, according to ~~any of the claims 7 to 12~~, characterized by the fact of mixing different diameter particle populations.

14. Process, according to claim 13, characterized by the fact of mixing particles that, after sizing, present population with diameters of, respectively, bigger and lower than 100 nm.

15. Process, ~~according to claim 14~~, characterized by the fact of performing the sizing step according to claim 9.

16. Process, ~~according to any of the claims 7 to 9 or 13 to 15~~, characterized by the fact that the hydration is performed according to claim 10.

17. Process, ~~according to any of the claims 7 to 10 or 13 to 16~~, characterized by the fact of using in the hydration step a solution according to claim 11.

18. Process, ~~according to any of the claims 7 to 11 or 13 to 17~~, characterized by the fact of using solutions according to claim 12.

19. Process, according to ~~any of the claims 7 to 18~~, characterized by the use of any of the following lipids, hydrogenated or not, individually or in mixtures, in any molar ratio: distearoylphosphatidylcholine (DSPC), phosphatidylcholine (PC), cholesterol (Chol) or derivatives, sphingomielin (SM), dioleoylphosphatidylcholine (DOPC), dioleoylphosphatidylglycerol (DOPG), phosphatidylglycerol (PG), dimiristoylphosphatidylcholine (DMPC), dipalmitoylphosphatidylcholine (DPPC), gangliosides, ceramides, phosphatidylinositol (PI), phosphatydic acid (PA), dicetylphosphate (DcP), dimiristoylphosphatidylglycerol, (DMPG), stearylamine (SA), dipalmitoylphosphatidylglycerol (DPPG) and other synthethic lipids.

20. Process, according to ~~any of the claims 7 to 19~~, characterized by the fact of the dinitroaniline is trifluralin.

21. Process, according to ~~any of the claims 1 to 6~~, when prepared by a process according to any of the claims 7 to 20.

22. Use of the liposomal formulations for the treatment in humans or animals, characterized by the use of a therapeutic efficient quantity of a dinitroaniline liposomal formulation according to ~~any of the claims 1 to 6 and 21~~.

5